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PLASTICS & MOLDED PRODUCTS

Volume 8 OCTOBER 1932 Number 10

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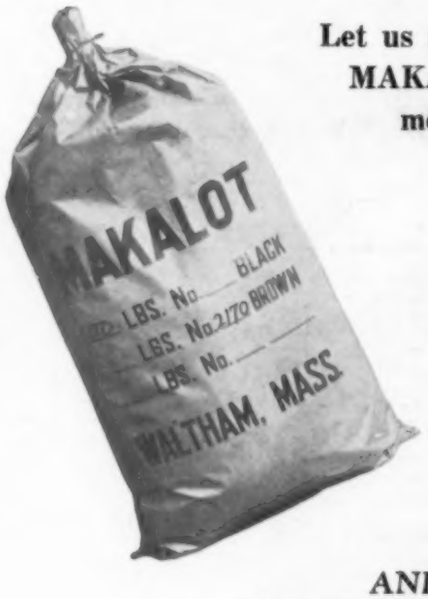

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AND DEMONSTRATE

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That it never sticks or stains your molds,
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That it is **truly the universal molding material.**

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PLASTICS & MOLDED PRODUCTS

420 LEXINGTON AVE., NEW YORK CITY

PLASTICS, Vol. 8, No. 10, Oct., 1932. Publication office 49 E. Washington Avenue, Washington, N. J. Executive office 420 Lexington Ave., New York City, N. Y., by the Plastics Publications, Inc., R. C. Gilmore, Jr., President. Subscription price, Domestic $2.00 per year, 25c per copy. Foreign, $3.00 per year. Canada, $3.50 per year. Entered as second-class mail at the Post Office at Washington, N. J., under the act of March, 1879.

PLASTICS & MOLDED PRODUCTS

Reg. U. S. Pat. Off.

Volume 8 **October 1932** **Number 10**

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A New Feature

Starting in the November issue, we will publish two pages devoted to stock molds. This series will cover all such molds now in custom molding plants throughout the country, illustrating the finished piece and reproducing the drawing. The pages will be perforated and arranged in such a manner that they can be punched and inserted in any of the materials hand-books now on the market.

At the conclusion, an Index will be issued, and looseleaf binders will be issued to those of our subscribers who wish to make a separate volume of this important data.

In presenting this series, we are working in collaboration with the New York Representatives, who inaugurated this effort earlier in the year.

We feel that this is a valuable service for our readers, since both the buyer and salesman will be able to determine instantly where stock items can be purchased.

The Publishers.

Carl Marx
Editorial Director

R. C. Gilmore, Jr.
General Manager

Robert C. Gilmore
Secretary

A. C. Blackall, British Correspondent; Heinrich Prehn, German Correspondent.

Plastics and Molded Products is indexed in *Industrial Arts Index* and *Engineering Index Service*

All editorial and advertising communications should be addressed to the business offices, 420 Lexington Avenue, New York, N. Y. Telephone Mohawk 4-2140. Foreign advertising representatives, Willing Ltd. 362 Gray's Road, London, W.C.1 and The A.D.S. Service, Berlin.

Subscription Price, Domestic $2.00, Canadian $3.50, Foreign $3.00 per year. Single copies 25 cents; back issues, 50c. Publication Office, Washington, New Jersey.

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PLASTICS & MOLDED PRODUCTS

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Volume 8 OCTOBER, 1932 Number 10

The Five and Dime Complex

By Franklin E. Brill

General Plastics, Inc.

WE hear a lot about "dishonest design" these days, particularly as applied to the shape and form of manufactured articles. But it's pretty hard to get anyone excited about its dangers. Most of us think of imitation and dishonesty as merely an affront to our aesthetic sense, and mention of an aesthetic sense is a signal for little more than a derisive hoot these hardboiled days.

But aside from all aesthetic affronts, and aside from the queer-looking anachronisms that it produces, dishonest design is probably one of the greatest enemies of prosperity that the plastics industry—and many other synthetic industries—has to contend with. It's just as serious to molders and fabricators as price-cutting. It's much more serious to the compound and resin manufacturer than competition with fly-by-night materials. It's gradually building up a five-and-ten-cent-store complex around plastics.

Advertising Cheapness

This "cheap" complex was starting subtly way back in the boom days, but with time being divided between the molding plant, the golf course and the stock-market, nobody paid any attention to it. We were all shouting gleefully about "cutting costs with plastics" and we thrived on substitution—replacing metal, wood, fibre, rubber, porcelain, and leather with great gusto. We kept shouting until we had convinced everyone that plastics were cheaper for big-production work than practically anything else. That was quite all right—if we had told only manufacturers and production men. But we told Mr. and Mrs. Consumer.

We advertised our cheapness to the world at large in an inexpensive and very convincing way—all too convincing, in fact. We imitated the forms and textures of the materials we replaced. It seems a harmless enough vice, perhaps even clever, but it served to broadcast to the consumer that this new molded substitute stuff must be cheaper than the genuine wood or metal it replaced. And the broadcast couldn't be mis-interpreted. Since the molded "mahogany" clockcase wasn't any better-looking than a real mahogany clockcase, the only possible reason for making it of this molded stuff, thought the consumer, was to make the thing cheaper. Thus started the cheap complex for plastics.

What harm? Well, one of the most logical applications for molded plastics yet devised—door-knobs and escutcheons—stands idle and undeveloped, because plastic knobs have been given a five-and-ten reputation with imitation walnut and mahogany molding. A plastic door-knob could be one of the most attractive touches in a building, as rich-looking and luxurious as any metal knob and structurally far superior, but with our crazy passion for imitation we have given them a cheap "substitution" reputation. When urged by their design counsel to add a molded knob to their line, one of the larger New England lock-makers sniffed haughtily, saying, "Why, they're in the five-and-tens!"

All Imitations

Yet we go on, dragging our marvelous new materials down even below the level of our poor but honest competitors, for no matter how "clever" our imitations may be, we fool no one, and we merely admit that we're cheaper than wood, or marble, or leather. People with taste—and there still are millions—refuse to clutter their homes with these objects which shriek their low cost. They'll never buy many of our elegant bird's-eye-maple beverage trays, molded of resin-impregnated paper, because the trays themselves announce to all who lift elbows nearby that they're cheaper than genuine bird's-eye-maple. It's really too silly. Here we have the first really new basic materials developed in centuries—materials of tremendous new

possibilities—and what do we do with them? We warp them into feeble and impossible imitations of materials we've already had for years, so that all we have now are lower production costs and a Woolworth heritage.

More Important Today

It didn't matter so much when we were producing hidden machine parts or mechanical pieces that had sufficient structural advantages to make them preferable to natural materials. But the reaction is beginning to make itself felt now, when industrial molding is at a low ebb and the only active markets are those in which consumer appeal is important. Here the five-and-dime complex steps in and hurts. It's more noticeable with the phenolics than with the ureas, not because of any inherent inferiority of the phenolics, but because the ureas have avoided imitating existing materials and have announced themselves as new, better-looking compounds — yes, better-looking than wood, metal or leather, and if they are used to replace wood or metal the consumer is not aware that it's being done to cheapen the product, yet, give a few atrocious designs and wide distribution in the chain stores, the urea compound will also feel the effects of the five-and-dime fixation, but mostly because of being associated with the imitative phenolic molding which went before.

Cheap! Cheap!

After all, it's not only imitation of existing materials themselves that hurts the imitators. Imitation of existing shapes and forms—such as a molded piece which, through lazy design, takes the same, familiar shape as a metal stamping—is just as much a confession that the use of molding compound is cheaper. Whether the plastic material imitates other material or not, whether it's plain white or plain black or a pseudo walnut, mahogany or marble, if it takes the form usually associated with the material it replaced, it is under suspicion. The consumer seems to have an unerring sense for ferreting out substitution, and immediately realizes that if a plastic piece isn't more attractive than its wood or marble predecessor, then the product is being cheapened.

A Backfire!

So we see our greatest selling point of a few years ago backfiring on us. But its been the same in other synthetic industries. When rayon was discovered it was offered to the public as artificial silk and the public turned up its nose. Later, when rayon's growing pains were over, it came out as Rayon, a material with a separate identity of its own. From then on it prospered.

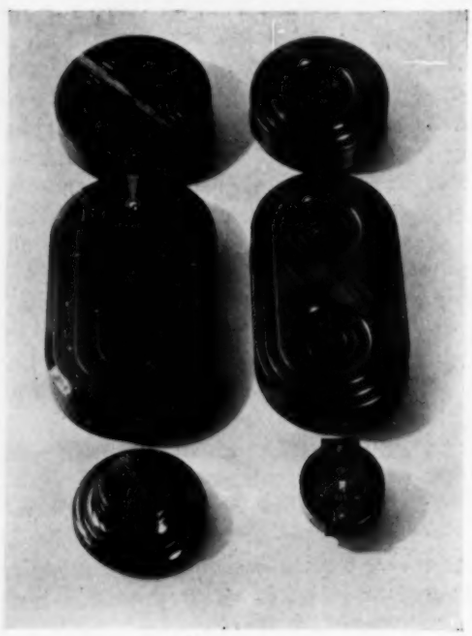
It seems to be an axiom that if a new material doesn't create a new identity and a new value, it doesn't get far. Public opinion, subdued but still powerful, seems to shape the destiny of our clever new things with an infallible sense of right and wrong. Imitation bricks, for instance. Those slabs of asbestos you nail on a wooden wall, — that can't-be-told-from-real-bricks-at-ten-feet — it just seems like a bad dream. No new values. Just a cheap sneaky imitation of what we already have.

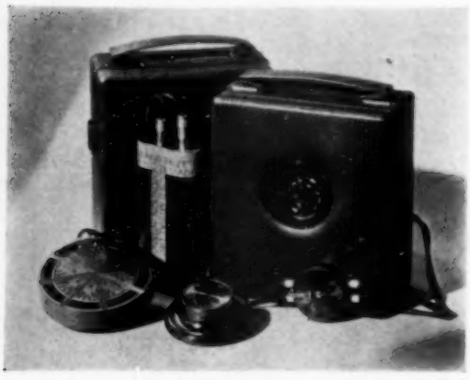
Not Too Late

Fortunately, as far as the plastics industry is concerned, it's not too late to mend. We've merely set ourselves back, but with a little intelligence we can regain our stride. First of all, we must stop imitating, both in surfaces and in forms. A molded box that looks dull and utilitarian unless it's mottled like wood is a poor design, and shouldn't be molded. If it must be molded, better have it utilitarian and honest than dishonest and cheap-looking. There may be times when this is impossible, but fabricators of plastics should realize that their future depends upon overcoming the cheap feeling. A real effort must be made if plastic materials are to be brought out of the depths to which they have sunk, and if those markets now closed to us because of our cheap "substitution" complex are ever to be opened.

It's a question of good design instead of amateur design. No good designer ever warped a material into an imitation of an-

(*Continued on page 401*)





This is the kind of designing that will lift plastic materials out of the rut where our passion for imitation has pushed them. There's no more beautiful mass - production article in the world than the Acousticon, designed by Joseph Sinel, and its molded parts are made of the lowest-priced type of compound available, plain black phenolic.

The Relationship of the Various Resins and Plastics

By Leonard Smidth, Ph. D.
President, Aldur Corporation

THE observer of the Plastic Industry has so far found comparatively little valuable material in general publications. To my mind, therefore, one of the most interesting articles published recently on synthetic resins is the one by J. G. E. Wright of the General Electric Company on "Alkyd Resins Developed Into New Forms" (Chemical and Metallurgical Engineering, August 1932). This article comes as a distinct illumination in a field that is virtually barren of any published ideas of the men who are responsible for the bulk of the work and the progress, with the exception of such matter as may filter through the Patent Office after many years delay. It is most unfortunate that there is not some manner by which those in any field or industry cannot publish the results of their researches without being almost certain that their work, or at least the most valuable portions of it, will be pirated by "Patent Racketeers".

In a recent discussion with Dr. Smidth about the work done by the General Electric Company, the Editor found Dr. Smidth's own theory so interesting that he asked him to present it to the readers of PLASTICS. This article, therefore, is the result, and while it does not go into exhaustive detail as to the degree of condensation or polymerization required for the resin of a definite type, it is only the intent of the author to present a general analysis. Dr. Smidth has indicated his willingness to expand the subject at a later date provided our readers show definite interest. Letters addressed to him, through us, will provide you with this opportunity.

Wright's Work

In the article mentioned above, Wright has shown how a single pure resin such as glycerol triphthalate is taken and its properties varied from an extremely flexible, flabby, rubber-like material to one which is quite rigid simply by adding various plasticizers in different amounts. The best plasticizers are apparently members of the same class of materials, glycol succinate, but the conventional plasticizers such as dibutyl phthalate could also be used. In this way a cast material of different properties was obtained, which could be machined and successfully used to give such articles as pencil barrels and toothbrush handles.

Wright mentions in considerable detail the various unsuccessful attempts to mold and plasticize the Glyptals, and speaks of the amount of time that has been wasted because of the distinct capabilities of the phenol-formaldehyde type of resin. This is a common experience to those of us who have worked with the other resins simply because we did not understand the inherent properties of any of these materials. To attempt to work the phenol-formaldehyde resin in the same manner as the older pyroxylin materials, is almost as unfortunate as trying to work steel on the same machinery that is used for glass. The only way to do this successfully would probably be to convert the steel into a material which had the same properties as glass. Similarly, if we cannot change the properties of one type of resin or plastic material to duplicate those of another type, we cannot expect to use the same technique when working with the former.

Wright has shown how he and his collaborators were finally successful in making a material which could be hot molded from the Glyptals by using glycol succinate as a plasticizer, taking 25% of the resin in the B state as a binder and thoroughly curing the rest, then working the whole up on the hot rolls. A material was obtained which could be extruded and sheeted in the same manner as pyroxylin.

This material is thermo plastic but, by careful heating, could be cured outside the mold to give an infusible product with many similar properties to the phenol formaldehyde resin in the C stage.

The most interesting part of Wright's article is that he shows how a similar resin may be taken and worked into other resins having similar properties, even though they are so widely different as Bakelite, Celluloid and rubber, simply by the use of a plasticizer and by the correct mechanical or physical treatment.

Glyptals Best

It was perhaps very fortunate that the object of the above study was the Glyptal resins because of their comparatively slow rate of polymerization (Polymerization is used here in the broader sense to include reaction) in changing from the soluable A stage, through the B stage and into the insoluble cured C stage. The phenol formaldehyde type of resin goes

through the above stages at a comparatively rapid rate so that a study of this reaction would not show us how to prepare a stable rubber-like or a celluloid-like material. Similarly, a study of a material like cellulose acetate would never show one how to prepare a material with the properties of the phenolic because it does not polymerize to an insoluble, infusible form.

"Universal Resin"

The thought which I have in mind in interpreting Dr. Wright's article is this: Are not all resins and plastics related through what, for want of a better name, I would call the "Universal Resin" in much the same manner that all animals are related through the evolutionary tree of life? Such a theoretical "Universal Resin" would be one which goes through all the different stages of a thermosetting resin, starting with the soluble A stage and ending in the insoluble final C stage, in much the same manner as a phenolic resin, but capable of being stabilized during any stage of the polymerization process so that a stable thermoplastic material could be obtained. Then by using a suitable plasticizer in the required proportions, could not one obtain a substitute for any resinous or plastic material? By stabilizing the resin in the rubbery stage and with the required plasticizer, we ought to obtain a material with the properties of rubber. By stabilizing the polymerization at a latter stage and in the presence of the required plasticizer one ought to obtain a substitute for pyroxylin. By stabilizing in the soluble A stage one ought to obtain a substitute for the varnish resins, such as rosin. Without stabilization the resin would react like the phenol-formaldehyde type. Thus we could reproduce the properties of almost any resin or plastic by the use of, or absence of stabilization, by varying the kind and proportion of plasticizer, and by proper physical working.

What Is Secrecy?

By

Manuel R. Ximinez

The Plastic Industry is today the field of spoken and written generalities. In other words, it is a field in which everything from products to men, has to be moldable or at least adaptable to the general limitations.

There are, of course, a few brilliant exceptions. Those concerns fortunate enough to hold capable heads, are the only hope of the workers; who in turn are the only hope of any industry.

This is intended to be a true and constructive discussion of the various handicaps found through personal observation of plants, products and men during more than a decade of activity, and is fortified by personal contacts with others engaged in a large number of diversified industrial branches served by the plastic field.

At first glance, our information looked to us like a kaleidoscopic picture; like a mass of heterogeneous and unsystematized effort prompted by commercial rivalry and by individual greed. A careful examination of the various parts, however, showed that there are two very distinctive roads open today to the manufacture of Plastic materials. "SUCCESS" is one of these roads. The other one, running in the opposite direction is "FAILURE". It all depends on how much of the harmful impedimenta the manufacturer is going to keep on carrying, and also, on how the road is going to be trod.

It is my sincere opinion that the march should be one of ALL ABREAST. Hurdles should be faced and discussed before anyone dares to attempt a jump. Every manufacturer should pledge himself to keep his product within the bounds previously assigned to his class. Within his realm, he should do the best to improve the quality of his product and to increase his profits honestly—that is, by exactly telling what his product is and what his product can or cannot do under all possible conditions. Advertising subterfuges and foolish sales talk help a firm to earn dividends for a while, but sooner or later they fail to convince the credulous.

At present, the Plastic Industry is very much under suspicion and the buyer, as well as the user, is perfectly justified in harboring a distressed feeling. It is the writer's hope that the following exposition of facts will show why.

The Manufacturer's Ethics

According to the current literature, there are over three hundred and fifty different plastic materials being offered in the World today. But after these materials have been properly classified, it will be found that the number of "truly individual plastics" is reduced to a comparatively small number. Consequently, the primordial differences between any of the products offered lies only on the more or less adequate names under which they are offered and sold.

The expiration of Patent rights is always followed by a rush of "grabbers" who expect to cash in on the reputation of a material by incorporating some unimportant improvement and making capital stock of it, or—and this is more common—by simply copying all the virtues claimed by the originator, plus a few more, and claiming that

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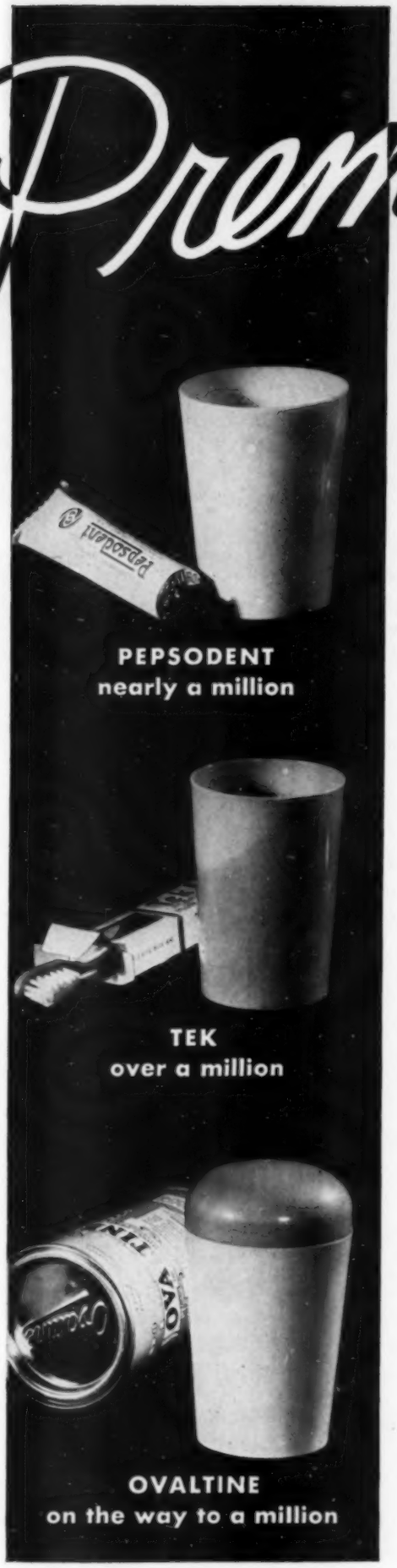

Premiums . . .

Today's winning sales strategy . . . and the molder's opportunity

Every up-and-coming sales manager of a consumer product is interested in "premiums" and "deals" these days. With large companies spectacularly showing the way, others must fall in line and give the public the kind of premium it wants . . . a "Beetle" Premium.

On this page we show three tremendously successful "Beetle" Premiums used with nationally-known branded goods. Read the record . . . and act.

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The demand is for low-priced, colorful Premiums . . . delivered by the hundreds-of-thousands . . . That makes the Premium Market a "natural" for molders who use "Beetle".

With "Beetle" you have a choice of ten radiant colors and pastel shades. "Beetle" has a fast molding cycle. It does not require stainless steel or chromium-plated molds. It insures moldings that are light, strong, dielectric, water-proof, tasteless, non-absorbent and non-inflammable.

We'll gladly send you samples showing the variety and beauty of recent "Beetle" Moldings.

SYNTHETIC PLASTICS COMPANY, Inc.
A Division of American Cyanamid Company
535 Fifth Avenue New York, N. Y.

"Beetle"

We Found The Right Material!

By

C. R. Gains
Measured Time, Inc.

"THE Hawkeye Has a New Brother", was the phrase we used in announcing a new "Measured Time" (trademark) Electric, an Interval Timer operating on 110V. A. C., 60 cycles (other cycles on special order). It has the patented Hawkeye Timer dial set from the front, but with a range from 1 to 120 minutes. At the expiration of a certain number of minutes, a buzzer signal is given. This can be adjusted to loud or soft by a turn of a screw on the base of the instrument. It also has a clearly visible long red second hand on a separate seconds circle, very important for laboratory counts and tests of less than a minute duration. It is a handy dependable device of great service where heating, washing, mixing, or other processes are to be timed to the minute.

The new Timer can also be had with special attachments at extra cost, such as pilot light, inside dial light, extra-loud horn, or a switch by remote control.

This device is finished in Richelain molded case, black, ivory, or onyx which we selected because of the smoothness of finish and variety of attractive colors that can be had, such as walnut to harmonize with office or laboratory; or the beautiful ivory to harmonize with hospital equipment or kitchen; the various marble and onyx effects, as natural as real stone, making a very rich, elegant, de luxe pattern for the most attractively furnished office, studio, or home. On the other hand, the black or gray are very practical for industrial fields. The material does not show the effects of grease and dirt in handling in the industrial fields as metal cases would. Then it is acid and rust proof. It is easily cleaned; with a little rubbing and shining it looks like new.

Why We Decided

The greatest factor for our decision in favor of a molded case was the fact that it is dielectric, affording greater safety against short circuit and personal contact with current. Such safety cannot be obtained with metal cases without a lot of extra operations to insulate. The molded case was more economical in initial cost than metal cases, either the stamped or die cast. It is finished ready for use when it leaves the mold and thus saves much handling in polishing, plating, or painting.

The lugs and bosses for fastening the clock movement in the case are all inserted and secured at the time of molding.

Unusual Molded Application for Remler Mike

By F. G. Hawkinson

A NEW condenser microphone, designed to meet all professional requirements, and embodying unusual construction features, will shortly be announced by the Remler Company, San Francisco. Notable among the innovations is the fact that almost the entire microphone is molded of self-insulating plastic material, the first time so many molded parts have been incorporated in microphone design.

The new mike has two stages of pre-amplification, and may be entirely A. C. operated with power supply unit, giving an essentially flat response from 40 to 10,000 C. P. S. It has a combination 50 and 200 Ohm output. Other features include an imbedded copper shield in the molded plastic head-housing to eliminate interference, an automatic bias, and a specially high permeability transformer core.

The construction of the pre-amplification unit is unique, partly from the standpoint of the great number of molded parts used, and also because of the pin-and-socket design, which

(*Continued on page 397*)

What Is Secrecy?

(*Continued from page 382*)

the "new" material is best. Just like that.

This practice is intended to deceive the buyer but only confuses him to the point where, when some worthwhile improvement is offered by someone else, the progressive manufacturer who has found it is faced with a tremendous sales resistance seasoned with a barrage of piquant and skeptical remarks.

Is this masquerade going to be allowed to keep on forever? If not, then the fit could rule out the unfit with a plan of action somewhat along the following lines:

1—By decreeing that every plastic manufacturer, no matter what their selected Trade name happens to be, disclose to what group their product belongs.

2—By ruling that all dangerous characteristics, if any, be included in all advertising matter and sales talks.

3—By ruling that in case of trouble of any kind, the Trade name used by the offender, plus the type of plastic, be made public.

4—By ruling out the use of symbols unless accompanied by the Trade name used to differentiate a plastic from its competitors.

The above rules should be adopted and enforced. Many a manufacturer may render dangerous a plastic, which, when properly compounded and made, is safe under normal conditions.

Secrecy in Dealing With The Industry

A—Secrecy may mean the with-holding of discovered laws or facts—honestly and scientifically proved to be of such importance to the Industry, that further Research or Investigation or Development is either underway or contemplated.

This is the course followed by a discouragingly small group of the major plastic manufacturers. These few progressive concerns support well directed

(*Continued on page 393*)

NATIONAL

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•

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NATIONAL N DYES

RESIN DYES

NEWS *of the* INDUSTRY

THE New York representatives of the custom molders met at the Machinery Club on September 14 for their monthly luncheon.

There were twelve men present representing nine companies, and also R. C. Gilmore, Jr., Publisher, PLASTICS & MOLDED PRODUCTS, as the guest of the group.

Mr. Gilmore gave a talk on the various types of plastic materials in use today, pointing out where and how they were competitive with molded products. He also discussed the different types of molding compounds, stressing the fact that almost every one has a distinct field of usefulness. Several large charts were displayed to show the basic characteristics of these materials.

In the subsequent discussion, Mr. Gilmore spoke of the Association work being done here and in Europe, outlining the methods employed by each group of manufacturers in their efforts to guarantee profits. It was the opinion of those present that, since price originally caused the decline of quality, the present price situation might be materially improved by stressing the quality factor.

The October meeting, which will be reported in a later issue, was held on the 19th. The next meeting will be November 9, at the Machinery Club.

Nema Meeting

At the annual NEMA meeting, held at the Westchester Country Club, Rye, New York, the Molded Insulation Section re-elected Douglas Woodruff as Chairman for the coming year. George K. Scribner was elected Vice-Chairman and James B. Neal, Secretary. The next meeting will be held at NEMA headquarters, 570 Lexington Avenue, New York City, on December 16.

Recent Moves

The Advertising Department of the Bakelite Corporation has been moved to the new plant at Bound Brook, New Jersey. Bakelite's Chicago office has also been moved and is now located at 43 East Ohio Street. It is manned by R. E. Brannan, C. A. Norris, A. D. Fowler and R. A. Brenneck.

The State Chemical Company, supplier of wood flour, is now located at 80 West Houston Street, New York City.

Walter Plaut, Representative of Internationale Galalith Ges., has moved to 79 Madison Ave., New York City.

Company Booklets

The Westinghouse Electric & Manufacturing Company has just issued an attractive four-color, twenty-four page booklet entitled "Micarta, a Decorative Material for Building." It is addressed to the architect and builder, and gives complete information for their use.

The Sharples Solvents Corporation has issued technical data sheets on their new amyl compounds.

A new 12 page Bulletin No. 36 has just been issued by Baldwin-Southwark Corporation, Philadelphia, covering their line of high-pressure hydraulic pumps both horizontal and vertical. A detailed description of the construction of these pumps together with tables of dimensions and of capacities is included.

Chemical Exposition Postponed

Because of the decided preference of exhibitors, the International Exposition Company has postponed the next Chemical Exposition until the week of December 4-9, 1933. The Exposition was originally scheduled for the end of February, 1933, but conflict with other shows, including the Century of Progress in Chicago, made the shift advisable.

Holding the Exposition from December 4-9 will bring it at an opportune time inasmuch as the annual meeting of the American Society of Mechanical Engineers also takes place that week.

This postponement may mean a decided financial loss to the management since leases and contracts had already been made for the former date. They have been wise in cooperating, and it is up to prospective exhibitors to help in making the December show a noteworthy attraction.

Meetings

The next annual meeting of the ASTM will be held at the Hotel Stevens, Chicago, Illinois from June 26 to 30, 1933, during the Century of Progress Exposition.

The December 1 meeting of the Franklin Institute, Philadelphia, will be addressed by S. P. Miller, Technical Director of the Barrett Company. His subject will be the "Improvements in the Art of Manufacturing and Utilizing Coal Tar Products."

New Press

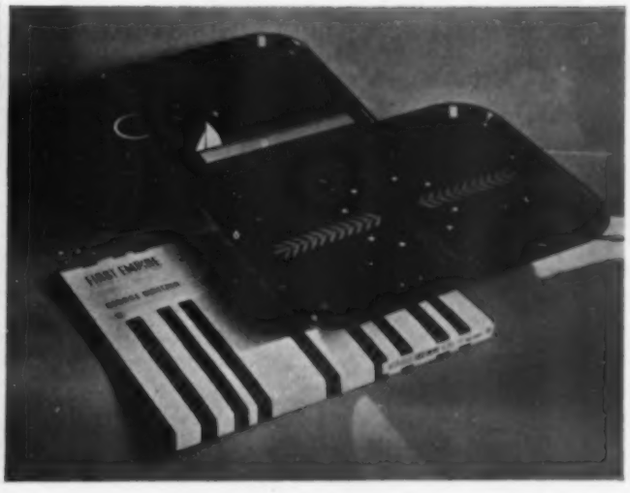
A NEW rotary preforming press to replace their DDS model has just been announced by the F. J. Stokes Machine Co. of Philadelphia, Pa. This new machine, the DDS-2, has a number of new and interesting features and changes built into it.

While considerably heavier than former models it is more compact and has simplified adjustments for both weight and pressure. It is designed for V-belt drive if desired and the motor is mounted on a hinged base. The punches and all moving parts, while accessible, are housed to protect them from the abrasive action of molding compounds. This protection, by greatly lessening the tendency for part wear and increasing the cleanliness of operation, reduces the amount of attention required to operate the machine. To further increase cleanliness of operation a dust collecting nozzle is built into the machine.

(*Continued on page 391*)

THE NEWEST SALES SUCCESSES

Heading our successes this month are these two illustrations of work done in the Far East,—in Japan. Molded by the Japan Bakelite Company, Ltd., the powder box on the right has the exquisite Japanese craftsmanship translated to its engraving. The native dishes and trays opposite have surface decorations of mother of pearl or lacquer. These items have the highest sales appeal for the feminine shopper.

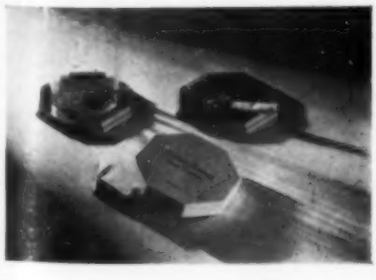


These ingenious book-ends not only have appeal plus but are marvelous examples of the molder's art. They are made of Bakelite molded by the Kurz-Kasch Company and merchandised by S. W. Hall. Our reproduction hardly does credit to the detail involved.

Appropriately enough, the beautiful new Micarta trays were introduced by their designer, George Switzer, at a tea in his studio. They are inlaid with brilliant colored metals, and there are two other designs than those above. Produced by Westinghouse.

A brand new re-use idea is developed by the Comfort Manufacturing Company in this powder box. The powder packet, when empty, is thrown away and the molded Durez base used as an ash tray or coaster. Molded by the Auburn Button Works.

Durez is going in for the re-use idea —and so are the manufacturers. Here we see the new Pioneer belt set, with the box in later use as a cigarette container. A jet black base and brilliant scarlet cover convey attractiveness. Molded by American Insulator.



This group of four bottles—Carter's jewel color inks—started a revolution in ink packaging. They capitalize on the demand for colored stationery. Black molded Durez closures and content-identifying colored labels complete the set, which retails for a dollar.

TECHNICAL ABSTRACT SECTION

A Review of Literature and Patents

Synthetic Resin. Alphons O. Jaeger, of Mount Lebanon, Pa., Assignor to the Selden Company, of Pittsburgh, Pa., a Corporation of Delaware. U. S. P. 1,860,098; May 24, 1932.

A synthetic resin composition containing at least one resin of the polyhydric alcohol-organic acid type, in which a portion of the acid is replaced by a phthalide substance and at least one synthetic resin which does not contain any phthalide substance.

A resin composition according to claim 1, in which at least one of the other synthetic resins is a phenol aldehyde resin.

A resin composition according to claim 1, in which at least one of the other synthetic resins is a urea resin.

A synthetic resin composition containing a condensation product of glycerine phthalic anhydride and a phthalide substance and at least one other synthetic resin which does not contain a phthalide substance.

Process of Treating Cellulose Material. William F. Richter, of Apollo, Pa., Assignor to Chemical Holding Corporation, of Apollo, Pa., a Corporation of Delaware. U. S. P. 1,860,03; May 24, 1932.

A process of preparing alkali cellulose for use in viscose manufacture, comprising treating a mixture of wood cellulose fiber and cotton dust the fibers of which are shorter than said wood fiber with an approximately 18% solution of sodium hydroxide, removing the excess sodium hydroxide, and grinding the thus-treated cellulose and during such grinding repeatedly reversing the direction of grinding at relatively short intervals of time.

Process for Making Cellulose Acetate. Florentin Bidaud, of Roussillon, France, Assignor, By Mesne Assignments to E. I. Du Pont de Nemours and Company, of Wilmington, Del., a Corporation of Delaware. U. S. P. 1,859,579; May 24, 1932.

The process of continuous manufacture of cellulose acetate which comprises imparting to the materials to be treated a continuous rotary motion about an axis inclined to the horizontal thereby to cause continuous forward movement of the mass during the entire reacting process, stirring the reacting mass with different degrees of intensity corresponding with the physical characteristics of the mass at different zones during its forward movement, introducing reagents in the path of the reacting mass and controlling the temperature of said mass in different zones during its forward movement.

Process for Forming Pulps. Earl P. Stevenson, of Newton, and Harry A. Buron, of Boston, Mass., Assignors to the Richardson Company, of Lockland, O., a Corporation of Ohio. U. S. P. 1,859,414; May 24, 1932.

A process of preparing a fibrous composition capable of being felted on a screen, which comprises subjecting under heat and pressure a mass of wet cellulose fibers and a bitumen having a ball and ring softening point above 190° F. to the masticating action of mixing blades revolving in a closed compartment the fibers throughout the mixing cycle in a moistened condition, and thereafter reducing the resulting wet fibrous mass to a pulp by mechanical dispersion in water.

A process of preparing a fibrous composition which comprises subjecting under pressure, fibrous material and water to the mechanical action of mixing blades revolving in a closed compartment, until at least a semi-pulped mass is obtained, adding a binder, and continuing said action until a fibrous mass is obtained capable of reduction to a pulp by a mechanical agency, on the addition thereto of sufficient water.

Molding Machine. Heinrich Hepperle, of Mulheim, Ruhr, Germany. U. S. P. 1,858,956; May 17, 1932.

In a molding machine of the character described, the combination of a feed tube, a hopper communicating with one end of said tube for the introduction of the molding material therefrom thereinto, a movable carriage, a mold mounted on the carriage and telescopically engaging the discharge end of the tube, a feed screw arranged coaxially within and extending at one end beyond the discharge end of the tube, said end of the feed screw being provided with a wedge-shaped head disposed within the mold chamber and presenting inclined surfaces operating to feed the material longitudinally of the mold and also laterally thereof, said feed screw being hollow throughout, a hollow core rod provided with lateral apertures spaced throughout its length, said rod extending through the feed screw and having one end fixed to the mold end, and means for opposing a yielding resistance to the movement of the carriage and the mold under the pressure of the material fed into the mold by the feed screw.

Steering Wheel. Harry Weida, of Plainfield, N. J., Assignor to American Hard Rubber Company, of New York, N. Y., a Corporation of New York. U. S. P. 1,858,650; May 17, 1932.

In a composition steering wheel, a reinforcing spider including a hub annulus having a depending inner flange, a separately formed hub member telescoped in intimate engagement with said flange and having overlying portions thereon engaging one side of said hub annulus for holding said hub member against axial movement in one direction relative to said flange, said hub member having a continuous recess formed around the periphery thereof adjacent the edge of said flange, and a body of composition material surrounding said hub annulus and hub member and extending into intimate contact with the walls of said recess to lock said hub against axial movement in the other direction relative to said flange.

Process for Producing Cellulose Esters. Georges Heberlein and Albert Bodmer, of Wattwil, Switzerland, Assignors to Heberlein & Co., A. G., of Wattwil, Switzerland, a Corporation of Switzerland. U. S. P. 1,858,993; May 17, 1932.

Process of producing cellulose esters which comprises producing a swelling action in the cellulose without substantial production of hydrocellulose, and while it is in the swollen condition and not alkaline in reaction, treating said cellulose with a reagent to esterify it.

Process of producing acetyl cellulose which comprises treating the cellulose without substantial production of hydrocellulose with a swelling agent to swell the same, removing the excess swelling agent from the cellulose, then washing the cellulose to remove an additional amount of the swelling agent therefrom, and thereupon treating the swollen material with a reagent to acetylize it.

Cellulose Acetate Composition of Matter Containing Ethyl Acetyl Glycollate. Henry B. Smith, of Rochester, N. Y., Assignor to Eastman Kodak Company, of Rochester, N. Y., a Corporation of New York. U. S. P. 1,858,287; May 17, 1932.

A composition of matter comprising cellulose acetate and approximately an equal amount of ethyl acetyl-glycollate.

Process of Preparing Stable Cellulose Ester Solution. Emil Hubert, of Elberfeld, Alex Rost-Grande, of Dormagen, and Karl Weisbrod, of Elberfeld, Germany, Assignors to I. G. Farbenindustrie Aktiengellschaft, of Frankfort-on-the-Main, Germany, a Corporation of Germany. U. S. P. 1,860,461; May 31, 1932.

The process of preparing cellulose ester solutions which comprises mixing at normal temperature a solution obtainable by esterifying cellulose in a mixture of glacial acetic acid, acetic anhydride and sulfuric acid with a solution of magnesium acetate dissolved in acetic acid about 50% strength containing magnesium acetate in a somewhat greater

amount than is necessary to react with the total amount of sulfuric acid present in the esterifying mixture, diluting the mixture with diluted acetic acid so that the mixture finally contains acetic acid of 65-75% strength and 8-10% of acetyl-cellulose, allowing the magnesium sulfate formed to crystallize and separating it from the solution.

Hardened Artificial Materials and Process of Preparing Them. Arthur Voss, of Frankfort-on-the-Main-Hochst, Germany, Assignor to I. G. Farbenindustrie Akt'gesellschaft, of Frankfort-on-the-Main, Germany. U. S. P. 1,860,441; May 31, 1932.

As new products, insoluble and infusible resins containing chemically entirely indifferent carboxyl groups, substantially identical with resins obtainable by treating phenolaldehyde condensation products containing carboxyl groups with ammonia and heating the water-soluble compounds thus obtained to a temperature of between 100° C. and 200° C.

As new products insoluble and infusible resins containing chemically entirely indifferent carboxyl groups, substantially identical with resins obtainable by treating condensation products obtained from the condensation product of phenol and formaldehyde and chloracetic acid with ammonia and heating the water-soluble compounds thus obtained to a temperature of between 100° C. and 200° C.

Method of Making Laminated Insulation Explosion Chamber Members. Charles F. Peterson, of Scotia, N. Y., Assignor to General Electric Company, a Corporation of New York. U. S. P. 1,860,158; May 24, 1932.

The method of constructing an insulation explosion chamber member for a liquid break switch which comprises applying successive strips of fibrous material impregnated with a resinous condensation product having slitted edge portions to the sides of a dummy having the appropriate form for the interior of the chamber, forming inwardly over one end of the dummy certain of said slitted edge portions to make the bottom of the chamber member.

Cellulose Acetate Composition of Matter Containing Salicyl Aldehyde. Henry B. Smith, of Rochester, N. Y., Assignor to Eastman Kodak Company, of Rochester, N. Y., a Corporation of New York, U. S. P. 1,858,286; May 17, 1932.

A composition of matter comprising cellulose acetate and approximately an equal amount of salicyl aldehyde.

Cellulose Acetate Composition of Matter Containing Guaiacol Acetate. Henry B. Smith, of Rochester, N. Y., Assignor to Eastman Kodak Company, of Rochester, N. Y., a Corporation of New York. U. S. P. 1,858,285; May 17, 1932.

A composition of matter comprising cellulose acetate and approximately an equal amount of guaiacol acetate.

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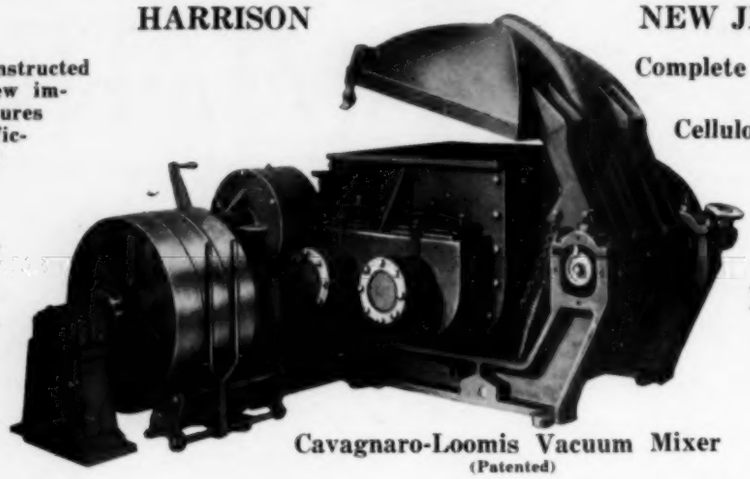

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NEWS *of the* INDUSTRY

(*Continued from page 386*)

This new model, like all other Stokes presses, is protected by an automatic excess pressure release which spills overloads and cushions the shock of each compression. In this case this device is controlled by heavy springs which replace the weight formerly used, adding to the compactness of the machine as well as facilitating fine adjustment of pressure.

The machine has a production up to 350 preforms per minute, a die fill up to two inches, and will make preforms up to 1 3/16 inches in diameter. Ball shaped preforms may be made by the insertion of the proper punches and dies. Patents are pending on this feature.

Tariff Changes

CANADA: Has changed, as of October 3, rates on regenerated cellulose and cellulose acetate sheets, transparent, and manufactures thereof from 10 per cent to 35 per cent ad valorem, under the general tariff, as applied to imports from the United States; and to 30 and 20 per cent, respectively, under the intermediate and preferential columns (formerly free). Sheets not less than 10/1000 inches thick, molded or pressed rods or bars, are duty free when for use in Canadian manufactures.

FRANCE: Has changed the import duties on resinous products. This is described in the July 25 issue of Commerce Reports, published by the Bureau of Foreign and Domestic Commerce, Washington, D. C.

Commerce Reports

Spanish imports of pyroxylin, including scrap, showed a small drop in poundage during 1931 and fell off over 50 per cent in value. Germany and France led the importations. (Issue; September 12)

Imports of synthetic camphor into the United States during the first half of 1932 increased in quantity and declined in value from 1,055,200 pounds ($350,600) in the first 6 months of 1931 to 1,128,200 pounds ($314,800) this year. (Issue; September 12)

Production tests are being carried out in Frederiksted, Norway, on a new material similar to pyroxylin, and derived from wood pulp, known as Trelit. (Issue; September 26) (This is not to be confused with the Trolit material manufactured by the Rheinische-Westfaelische:—Eidtor's note)

A German manufacturer of synthetic resins wishes to purchase American phenol, cresol and formaldehyde. (Issue; September 5, Number 54198)

Bureau of Standards

THE proposed revision of simplified practice recommendation R45-32 covering grinding wheels has been accorded the required degree of support by industry, according to an announcement by the division of simplified practice of the Bureau of Standards.

In this latest revision, the third since the recommendation was formulated and developed by the industry in 1925, the tables listing standard wheels of various types are rearranged to make the locating of any particular wheel more convenient. New wheel sizes necessary to meet the current needs of the consumer were also added.

The revised program is to become effective on October 1, 1932.

The required degree of acceptance has been accorded the current revision of the simplified practice recommendation R89-32 covering coated abrasive products, and it is to become effective on October 1, 1932, according to an announcement by the division of simplified practice of the Bureau of Standards.

The original draft of this recommendation was formulated and developed by industry in 1928. The present changes were proposed by a representative standing in 1928. The present changes were proposed by a representative standing committee of the industry for the purpose of bringing the recommendation into accord with current demand.

DR. JOHN T. STEARN, who, during the past two years, has been in charge of the production department of Toledo Synthetic Products, Inc., manufacturer of "Plaskon," a urea-formaldehyde molding compound, has rejoined the investigatory staff of Mellon Institute of Industrial Research, Pittsburgh, Pa., where he will head the industrial fellowship sustained by this company. Dr. A. M. Howald, former holder of the same fellowship, is now engaged in production research in the company's plant in Toledo, Ohio.

A manufacturing agreement has been concluded between Riehle Bros. Testing Machine Company, of Philadelphia, and The Torrington Manufacturing Company whereby the machines and instruments of the former company will be built by The Torrington Manufacturing Company of its Plant in Torrington, Connecticut.

Riehle Bros. Testing Machine Company will retain its corporate identity and will continue to conduct its engineering and sales. It has been in business since 1825 and was the pioneer developer of physical testing equipment in this country.

The Torrington Manufacturing Company was organized in 1885. It specializes in the design and building of a great variety of machinery, largely of a special nature, used in strip, sheet, tube, rod, wire and cable mills. It has also a manufacturing department given over to the production of a large variety of press and screw machine products.

New evidence of the growing importance given to industrial

design by leading manufacturers, is seen in the filing of incorporation papers for Van Doren & Rideout, Industrial Designers, Toledo, Ohio. Since May, 1932 Mr. Van Doren and Mr. Rideout have handled the design for the Toledo Scale Company and for Toledo Synthetic Products, Inc., manufacturers of Plaskon, a synthetic molding compound.

Already this new firm has won wide acclaim in the field of industrial design through the new Toledo Public Health Scale, which it conceived. In connection with their work for Toledo Synthetic Products, Inc., Van Doren & Rideout have done designing for The Reynolds Spring Company, Jackson, Michigan; Chicago Molded Products; Air King Radio Products, New York City; The Wakefield Brass Company, Vermillion, Ohio; and others. The firm is equipped to handle all phases of industrial design.

The publication "Electrical Insulating Materials" contains the extensive 1932 report of A. S. T. M. Committee D-9 on Electrical Insulating Materials and all the standard methods of testing insulating materials that have been developed by the Society. There are 29 standards included, of which 18 are test methods promulgated by Committee D-9, 10 are specifications covering rubber and textile products used in the electrical industry, and one is a method of testing the insulating qualities of slate.

Several of the test methods are new ones, accepted by the Society this year, covering laminated tubes, laminated round rods, flexible varnish tubing and pasted mica. A new test for grading natural mica is included. Revisions in existing methods involve tests for untreated paper, laminated sheet materials, varnished cloth and cloth tapes. The tests for dielectric strength of sheet and tape materials and for power factor and dielectric constant of insulating materials, are included in their revised form. Revised specifications for friction tape for general electrical purposes and rubber insulating tape are given. Other test methods included are for molded materials, electrical porcelain, insulating oils and varnish, splicing and pothead compounds. Tests for the resistivity of solid and liquid materials, for comparing the thermal conductivities of solid insulating materials and a method of impact testing are given.

The report of Committee D-9 outlines the more than 25 research projects currently before the several subcommittees and gives progress reports. This committee is a very active one and is doing a great deal of important work on many materials used for electrical insulation.

Copies of this publication, bound in heavy paper and aggregating 236 pages, can be obtained from A. S. T. M. Headquarters, 1315 Spruce St., Philadelphia. The price is $1.25 per copy.

British Industry Notes

By A. C. Blackall

The recent important announcement of Tootall-Broadhurst of England of the successful completion of fourteen years work on creaseless textiles, has interested everybody in the plastic field. An officer of this company, we understand, will shortly visit America, and we shall be glad to act in putting our readers in touch with him.

Our November issue will carry a complete story of this development, dealing with the manufacturing process employed and the importance of the urea-formaldehyde resin.

THE Society of Chemical Industry has decided to form a Plastics Section, the object of which will be to hold meetings, to present for publication in the Society's Journal the reports of such meetings, and to encourage the development of publication in the Journal of abstracts of literature dealing with the plastics industry. The chairman of the new section is H. V. Potter, of Bakelite, Ltd., at the head of a committee of fifteen men all of whom are connected with and well-known in the British plastics industry. All members of the Society interested in any way in plastics and their primary materials, manufacture, and application, and in appropriate plant and appliances, are eligible to join the new section without any fee additional to the Society membership.

The London Chamber of Commerce announces that a new process has recently been developed whereby electrcal insulation and plastic materials can be made from waste leather, seaweed and various vegetable fibres. This process, which consists essentially of tanning and vulcanizing, enables materials of differing flexibility and hardness to be produced from the same base. Two types of insulating material and a promising sole leather have been produced and are undergoing scale tests. A dough suitable for all molding purposes has been evolved, as well as a panelling which can be sold at a very low price. This process opens up possibilities of vast developments.

Monsanto Chemical Works, Ltd., has let a contract to the Metropolitan Vickers Company for the construction of a high pressure steam plant and a power generating plant for their Ruabon, North Wales works.

The program involves an expenditure of approximately $350,000.00.

What Is Secrecy?

(*Continued from page 385*)

and well organized Technical Departments. Whatever they call Research, is such. Some of their work is fundamental, and these concerns are a credit to the Industry, to the Nation and to the World at large. The record of their accomplishments and of their profits shows that true, systematic and ethical investigation pays.

B—Secrecy may mean the with-holding of discovered facts thought to be of vital importance to the Industry, but without working or planning to fundamentally ascertain the truth and the practicability of the facts discovered.

As a rule this practice is followed by a number of firms. These firms have failed to realize that the secret of Research is leadership. No group of men, no matter how large, how brainy or efficient, will ever accomplish anything of permanent value unless their efforts are organized. But co-ordination of thought and system in action are not enough. There are the two other often neglected and most important factors. Respect for the leader is one. Contended enthusiasm on the part of the led is the other factor.

A Director of Research commands respect only when the members of his staff believe in him—as a technician and as a man. The Technical leader in Research has to be a Scientist and a Business man. There is nothing paradoxical in this statement. Men of this calibre are hard to get, but the type is not extinct by any means.

Today, a fairly large number of Technical Organizations are nothing but heavily burdened staffs without a leader worthy of the name. The result is a ruinous extravagance—a wealth of time and effort wasted, and a lot of stupid and unverified patent claims filed away.

C—Secrecy may mean the with-holding of facts which are

(*Continued on page 395*)

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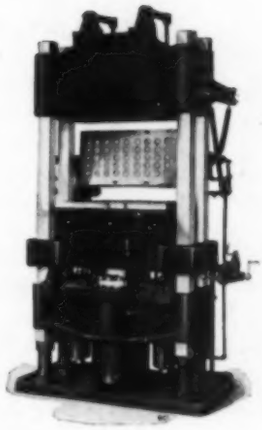

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THE most recent Bulletin of Arthur D. Little drives home today's "Bargains in Brains". Seldom in industrial history has there been such a super-abundance of trained men, skilled and schooled in the affairs of every line of business, now looking uncomplainingly and, for the most part, unsuccessfully, for qualified work. The progressive organization will strain a bit, realizing this, and pick up the brains for future profits. In such a situation, every trade paper has a well-defined place. Its Editors and Publishers are usually more thoroughly acquainted with available talent than any agency. Most of them classify, just as we do, sorting this talent, by personal knowledge, into its logical outlets.

But we need outlets. The heads of companies, reading this, who have hesitated over a new salesman, technician or operator should now outline their needs to us. We will give every consideration to these needs, ultimately, we hope, leading them to a satisfactory contact with the man most suited for the job. We have no intention of swamping them with ordinary applicants; our only interest is to do our share in supplying real "Bargains in Brains".

Plastics Publications, Inc.

What Is Secrecy?

(*Continued from page 393*)

believed to be useful to competitors because the Manufacturer on whose premises the facts were discovered knows not how to use them.

There is no excuse for such conduct. The individuals responsible for it are selfish and narrow minded. Moreover, they are mighty poor business men, because if they have been fortunate enough to strike something which appears to be promising, they ought to have sense enough to do their best to cash in. If their volume of business would not warrant the steady employment of a technician, there are free lance consultants and established experts who, for a nominal fee, would be glad to tell them what is what and do so honestly.

The trouble in most instances is that what the ignorant call secrets are no secrets at all for the well informed. On the other hand, it may happen once in a while, that the secret holder actually has something valuable. A missing link—or perhaps the foundation of a new theory. At any rate, men who keep things secret without knowing if the things are secrets or not, never live to see their Aladin lamps project light their way. These dreamers should be taught to release that inborn fear that always goes with the ignorance of fundamental facts and principles. Association, enlightment and a well digested and very emphatic Manufacturing Code of Ethics would give to them the confidence and the encouragement necessary to come forward with their much cherished "secrets".

D—Secrecy may mean the keeping of fraudulently acquired formulae, processes or equipment, fearing detection and subsequent prosecution.

The gathering of information from analytical or shop work as well as from the labors of spies and unscrupulous ex-em-

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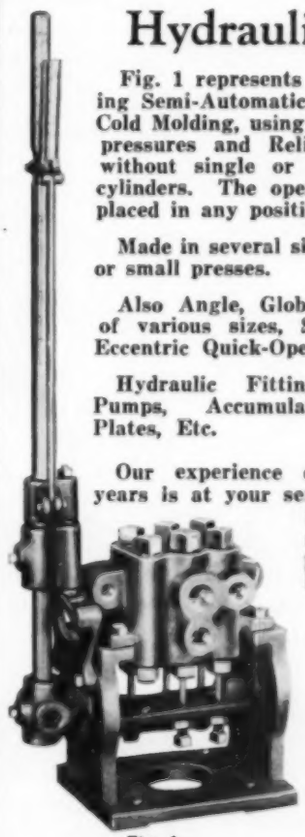

Fig. 1

Fig. 1 represents a valve for operating Semi-Automatic Presses for Hot or Cold Molding, using high and low water pressures and Relief, either with or without single or double "Pull-Back" cylinders. The operating lever can be placed in any position shown in Fig. 2.

Made in several sizes for use on large or small presses.

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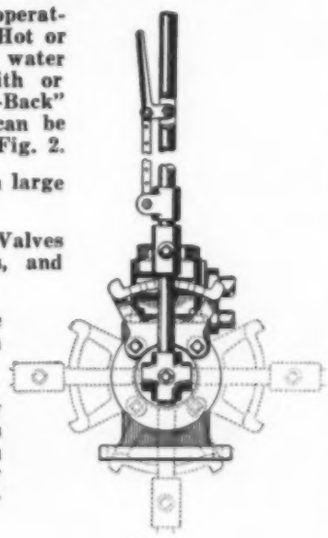

Fig. 2

Established 1872.

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ployees should be discouraged and made punishable with ostracism. The names and records of the offenders should be entered in the log of "Plastic Shames".

E—Secrecy may mean the trick of studying Patents granted, hoping to find loopholes in which to insert well studied wedges with the sole purpose of harassing the owner.

Today, we have in America quite a few firms doing a thriving business of this type. As a rule, they victimize the small fry for the benefit of someone bigger. The Law does nothing —cares nothing. But the victims are up against it.

Most patent applications of this character are only assumptions—not sufficiently proven facts. However, quite often they serve their purpose by either handicapping the owners of existing Patents or by keeping inventors from applying for others, perhaps more useful and at least more honest.

F—Secrecy may mean the keeping of new formulae, processes or equipment without Patent protection because imitation is feared.

This not too uncommon infringement of the laws of Industrial ethics, and of the rules of common sense besides, is a direct consequence of the evils explained above.

The empyrical industrialist always believes that a formula or a process resulting from his rule of thumb methods is wonderful. He believes more than that. He is completely convinced that the value of his hidden treasure—and I am supposing it to be a treasure—will be eternal. As a matter of fact all of us who have spent long years in the fields of battle know that almost any man with a good background and with a reasonable amount of experience supplemented by a modest creative power could, in most cases, improve the gem—produce it cheaper or prove it to be a false alarm.

All the worth while ideas and discoveries faithfully proven

should be protected. Drafts given to the Patent Office should be clear and true. Patent Law violators ought to be exposed, prosecuted and then punished without cost to the despoiled.

G—Secrecy may mean the keeping of silence about infringements of formulae, processes or equipment detected in Patents applied for or newly granted.

It happens with reasonable frequency, that two or more men sometimes living in far apart worlds, are simultaneously endeavoring to solve the same or related problems. Solutions may be the same. If the Manufacturers could trust each other, the easiest way would be to join efforts, thus helping to cut down the expenses and the time as well. Moreover, more brain power and more experience would be available.

At present, the common procedure is to either hide the facts and keep going or else to bring a law suit. Priority rights are madly and expensively fought and while the bulls are fighting, some smaller fellow proceeds to eat their hay. The way in which this is done is quite simple.

(*Continued on page 398*)

Molded Remler Mike

(*Continued from page 384*)

makes replacement and servicing simple and fool-proof. The molded parts not only lighten the assembly considerably—the complete mike with cable weighs but twenty pounds—but also cuts down the diameter of the pre-amplifier housing to two and a half inches, so that the view of the speaker is not obstructed. All of the other exposed pieces except the flexible grill over the diaphram are molded of Durez, a light-weight phenol molding compound produced by General Plastics, including the head housing and the suspension coverter plug, which instantly enables the user to turn the mike into an overhead suspension type.

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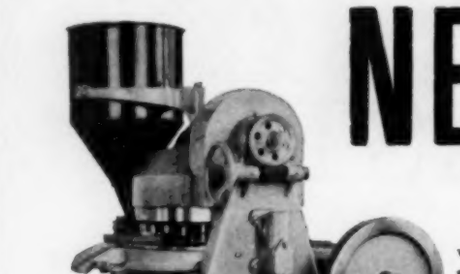

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What Is Secrecy?

(*Continued from page 397*)

If the law suit is long, someone gets something that renders the discoveries or facts worthless. Bills are paid and everyone is happy but the contestants. To pay highly and for nothing, is very unpleasant.

If the law struggle is short, the fighters may be sure that no matter who the winner is, the wedge builders will show sooner or later—somewhere and somehow. The arguments brought forth by the contending parties to win their points, are always used by the sneak to stop them.

Much has been written on the subject "Patents", but the truth as far as the Plastic Industry is concerned has not been told.

Secrecy in Dealing with the Customer

This type of Secrecy may mean the changing of formulae, or process or quality, for gain and without giving the customer a chance to try the new materials knowingly.

Buyers often wonder why it is that products well known to them act differently all of a sudden. This causes them to lose time, materials, and sometimes even customers. Of course, errors in processing or fabricating may have occurred —such things happen. But this is not always the case and the Manufacturer who indulges in "change and keep silent methods", knows why.

The dream of all Managers is to beat their rivals in volume sold. Being inefficient, the only way for some is to decide on throat-cutting prices. Cheaper products and cheaper labor, cheap supervision or no supervision at all follows. Wild ideas are adopted on the spot before a well systematized series of practical trials has been made over a reasonable length of time. The results are always disastrous.

There is one more type of Secrecy which is quite difficult to understand and yet, the technician has to contend with it in many plants. The things kept

from him under this heading are:

a—The material returns obtained through his work and efforts.

b—The aim and purpose of much of the work he is called to do.

c—Valuable information obtained from various sources which if on hand would assist him in his labors.

d—The criticism of other workers in Departments directly connected with his own.

Anyone can see after carefully examining the four subtypes that selfishness rules them all. Secrecy on all these points tends to take the credit for accomplishment from the rightful source to let someone else enjoy the pickings. Real Executives or leaders of Technical Departments are too big and too magnanimous to thrive on such inhuman practices. They spread discontent, lack of efficiency, animosities, and when the time is ripe, they bring changes. Turnover in general is expensive. When highly specialized technical men are concerned, it is more expensive than many realize.

In closing I will say that in my opinion, what we need is a less diversified Plastic Industry. A more accurate estimation of human and commercial values. A true sense of confidence and justice—from all to all.

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Our November issue will carry a detailed account of the work on creaseless fabrics being done by Tootall-Broadhurst of England. Watch for it!

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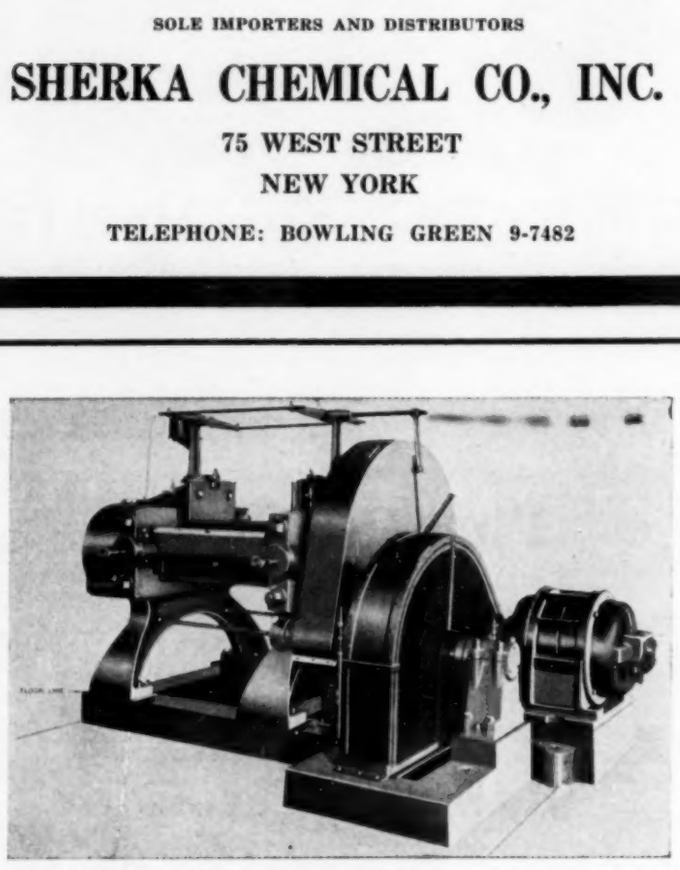

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Statement of ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of Plastics & Molded Products published monthly at Washington, N. J., for October 1, 1932.

State of New York, County of New York ss.: Before me, a Notary Public in and for the State and county aforesa.d, personally appeared R. C. Gilmore, Jr., who, having been duly sworn according to law, deposes and says that he is the Business Manager of Plastics and Molded Products and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Plastics Publications Inc., 420 Lexington Avenue, New York City; editor, Carl Marx, 420 Lexington Avenue, New York City; managing editor, none; business manager, R. C. Gilmore, Jr., 420 Lexington Avenue, New York City.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member must be given.) Plastics Publications Inc.: R. C. Gilmore, Jr., 420 Lexington Avenue, New York City; R. C. Gilmore, Sr., 420 Lexington Avenue, New York City; Carl Marx, 420 Lexington Avenue, New York City; A. K. Gilmore, 420 Lexington Avenue, New York City.

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R. C. GILMORE, JR.
Business Manager.

Sworn to and subscribed before me this 6th day of October, 1932.

(SEAL) MALCOLM H. FROST

Notary Public, New York, County No. 225.
My commission expires March 3, 1933.

BUY THESE SEALS
TO PREVENT TUBERCULOSIS

Five and Dime Complex

(*Continued from page 380*)

other material—it's ridiculous and unthinkable. Each material has its particular identity with competent designers, and they use them so as to bring out its best features, not hide them. It is to these men and women, these tried-and-proved designers to commerce, that plastics must look for guidance. An example of how they help us can be seen in the case of that highly successful barometer that employed molded plastics so well and so honestly. When the designer mentioned his intention of using molded plastics, the manufacturer dissented, saying that the company's dealers were dead set against plastics, associating them with cheap chain-store merchandise. However, the designer persisted and presented his views on the subject—in the form of a plain rubbed-finish black molded case, accented with chromium strips, an honest design which reflected quality from every angle. It was put into production, and even at a high price sold more than half again as many as it had the previous year. As a result, this particular manufacturer has overcome his five-and-ten complex, and plans many more molded plastic models in its next year's line.

Dozens of similar instances can be cited, but we seem to ignore the implications and go right on cheapening our versatile new materials. Now is the time to sit up and do a bit of thinking, what with the consumption increase curve of plastics levelling off alarmingly, and the harmful effects of our dishonesty beginning to kick back. We're slow to come of age, slow to come out and announce ourselves as new basic materials, as all the other synthetic materials have found it necessary to do. Let's foster better design, honest design, and demonstrate to industry and the consumer that we're not necessarily cheap five-and-ten-cent-store products.

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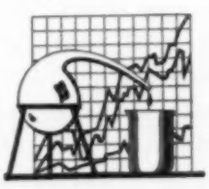

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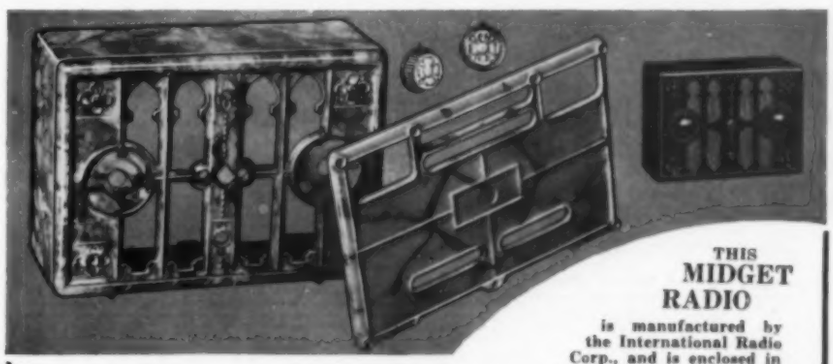

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Retail outlets are warning of signs of good Christmas business. Somehow or other, people always find the money for the gift season. The wisest manufacturers, after a careful inventory and survey, are getting prepared for this by ordering when their suppliers can execute rapid shipments with a minimum of rejects. Those who wait until the last minute will have the headaches. For industry too, therefore, the slogan "Do your Christmas shopping early".

Moreover, with prices still at rock bottom, quality is being added to every line; added, because suppliers who cannot go lower in price must give a quality advantage to the buyer. This may continue, of course, even in boom times. But costs will increase and raise prices accordingly. Increased production always has this primary effect.

Perhaps it isn't Prosperity, but Christmas is most certainly around that corner.

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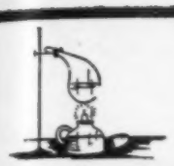

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And Now, In Closing:

IN the East, the most exciting recent news was . . . the equity receivership of Boonton Rubber . . . we understand it means the reorganization of the company . . . and it is continuing to operate . . . R. W. (Ron) Post has left them . . . he is now Chief Engineer for George Scribner at Boonton Molding . . . While on this subject of Equity—God save the mark!—we must report . . . . that Kurz-Kasch are doing very nicely, thank you . . . D. S. (Don) Kendall of Mack set a record this summer . . . at your scribe's home town of Rutland, Vermont, he scored a hole-in-one on the twelfth hole of the Country Club . . . nobody ever shot an ace on this hole before . . . John T. Stearn of Plaskon, Toledo, talked on plastics at the local ACS meeting on September 20 . . . Louis E. Underwood is now manager of the G. E. Pittsfield works . . . To go back, the old Johnson Molding & Tool Co., in case anybody cares, paid a 4½% dividend to creditors . . . we do pick up the darndest things! . . . According to the Associated Press, Reynolds Spring has put on 1150 men since September 1 . . . all in the plastic division, too . . . then, to celebrate, they resigned from the NEMA Molded Section . . . the same thing (and we don't mean 1150 men) was done by Boonton Rubber and Niagara Insulbake . . . J. Stogdell Stokes (Durite) has been elected a director of Pennsylvania Salt . . . Leon Quigley talked at the Pelham meeting of the Chemist Club . . . Frank Shaw has discarded his crutches and continues to improve . . . G. C. Wilson is also much better, and has moved to Elizabeth, New Jersey . . . A firm in Delaware is considering the introduction of a new molding powder . . . and fourteen stories above this, as we write, another concern does the same . . . New products that have appeared during the past month are too numerous to mention . . . it will pay anyone interested to take a leisurely stroll through Woolworth's . . . we'll gladly act as guide. . .

WHEN you have an established production job and you cut the price 5% to hold the business do you gain 25% greater volume? Silly question? No, for if you don't you are actually keeping it at a loss!

Printer's Ink tells you all about it in a recent issue, and how we wish we could engrave it, with fancy undercuts, on the minds of some in the trade. Look at these established facts and then at some recent quotations:

A cut of 5% requires a 25% increase in volume.
A cut of 10% requires a 66% increase in volume.
A cut of 12½% requires a 100% increase in volume.
A cut of 15% requires a 150% increase in volume.

And, in relation to turnover, cut prices have a sharp meaning:

A cut of 5% requires a turnover of 1.33 times.
A cut of 10% requires a turnover of 1.85 times.
A cut of 15% requires a turnover of 2.95 times.
A cut of 20% requires a turnover of 6.25 times.

THE preceding figures were based on a wide study of the various factors. The other extreme, no study at all, has been brought out by a recent editorial in Class & Industrial Marketing. It concerns the bottle-cap manufacturer who leaked—leaked caps, for months and months, not counting them but shipping them by weight. He did this until orders came through for bottles without caps,—50,000 of them. The customer, of course, had received that bonus in caps. Now the manufacturer is doing what he should have done at first; counting his shipments with a photoelectric cell.

WE find ourselves yearning for the old ballyhooless days. In the face of sharp industrial declines in leading business, fluctuating commodities, big debts and smaller incomes, the politician and publicity agent continue to stretch their vocal cords around "prosperity corner". Much of this will be gone and thankfully forgotten before our next trip to the presses. The electoral college will have a new group of freshmen and the country a new group of stalematers.

Political crises have become horribly forced. The stage is filled with a group of actors, conning lines by route, playing to an audience half of which is blase and the other half wildly approbative, for a consideration. Gone are the days when torchlight parades swung around every corner; when such issues as free silver and even suffragism strained the stoutest family ties; when little Democratic boys rolled in the schoolyard in fierce conflict with Republican eighth graders; when free beer and cigars were the routine and the dinner pail magically filled itself.

And why? Because the psychologist claims politics is now an art; because business is in politics and politics in business, trying on each others' shoes; because we turn both cheeks to Europe and our backs to our neighbors; because bond issues and unbalanced budgets of a few billions are visited on our children's children; because the Jimmy Walkers are termed statesmen and the Herbert Hoovers, fools; because, in short, we are too human for self-government.

But it will soon be over, this tumult and touting, to R. I., in comparative, P. for four more years.

We're going right out and vote for Upshaw and get it over with.